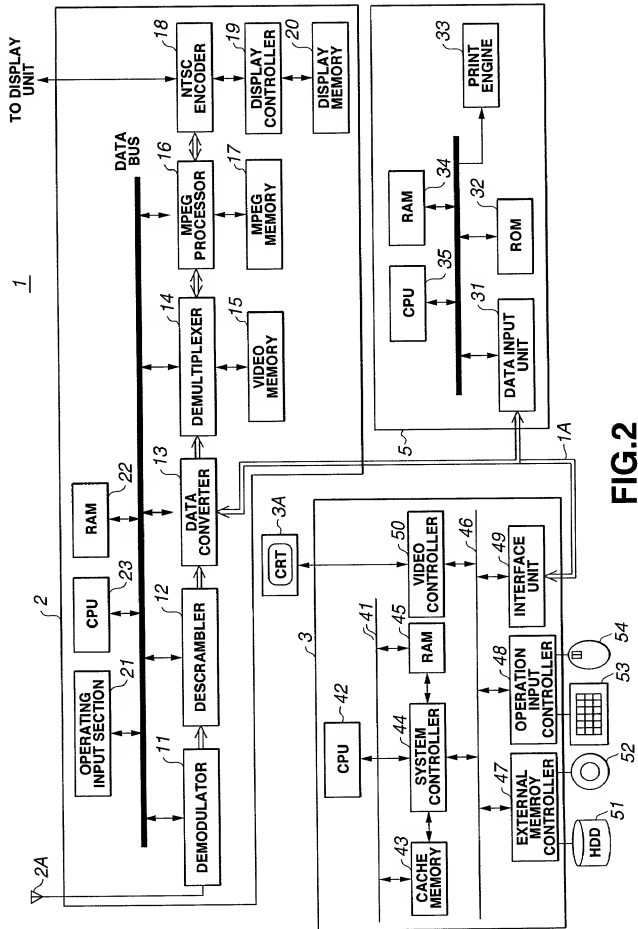


FIG.1



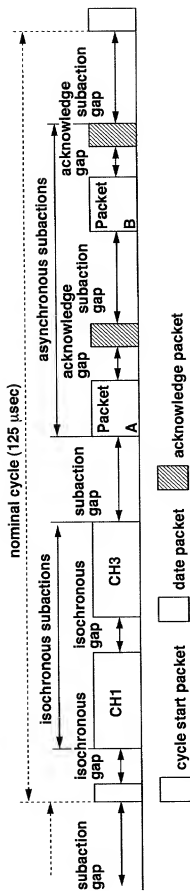


FIG.3

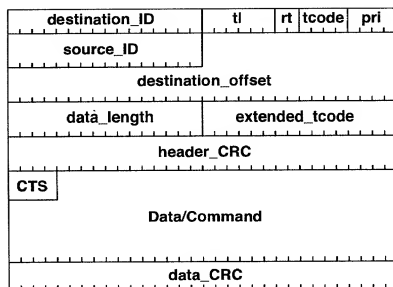


FIG.4

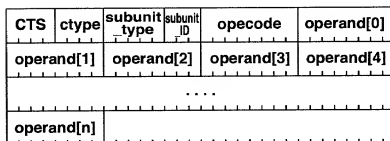


FIG.5

[illegible]

00000000-00000000

Address Offset	Contents
00 ₁₆	media_type
01 ₁₆	Media_size
02 ₁₆	
03 ₁₆	
04 ₁₆	reserved
05 ₁₆	Print_quality
06 ₁₆	Mono_color
07 ₁₆	offset
08 ₁₆	
09 ₁₆	
0A ₁₆	
0B ₁₆	Layout_type
0C ₁₆	
0D ₁₆	
0E ₁₆	

FIG.7

	msb							lsb
opcode	CAPTURE(42 ₁₆)							
operand [0]	subfunction							
operand [1]	source_subunit_type				source_subunit_ID			
operand [2]	source_plug							
operand [3]	status							
operand [4]	dest_plug							
operand [5]	print_job_ID							
:								
operand [16]	data_size							
operand [17]								
operand [18]								
operand [19]								
operand [20]								
operand [21]	image_size_x							
operand [22]								
operand [23]	image_size_y							
operand [24]								
operand [25]	image_format_specifier							
operand [26]								
operand [27]								
operand [28]	reserved							
operand [29]								
operand [30]	Next_pic							
operand [31]	Next_page							
operand [32]								

FIG.8

Value(MSB)	Value(LSB)	Type	Meaning
00 ₁₆	sRGB raw		
	00 ₁₆	sRGB raw	
	01 ₁₆	sRGB raw,quadlet	
01 ₁₆	YCC raw		
	0X ₁₆	YCC4:2:2 raw/pixel	
	1X ₁₆	YCC4:2:2 raw/line	
	8X ₁₆	YCC4:2:0 raw/pixel	
	9X ₁₆	YCC4:2:0 raw/line	
	X0 ₁₆	Pixel ratio 1.00×1.00 /ITU-R BT.709-2 / interface	
	X1 ₁₆	Pixel ratio 1.19×1.00 /ITU-R BT.709-2 / interface	
	X2 ₁₆	Pixel ratio 0.89×1.00 /ITU-R BT.709-2 / interface	
	X3 ₁₆	Pixel ratio 0.89×1.00 /ITU-R BT.601-4 / interface	
	X8 ₁₆	Pixel ratio 1.00×1.00 /ITU-R BT.709-2 / progressive	
	X9 ₁₆	Pixel ratio 1.19×1.00 /ITU-R BT.709-2 / progressive	
	XA ₁₆	Pixel ratio 0.89×1.00 /ITU-R BT.709-2 / progressive	
	XB ₁₆	Pixel ratio 0.89×1.00 /ITU-R BT.601-4 / progressive	
10 ₁₆	DCF Object		
	00 ₁₆	Exif 2.1	
	01 ₁₆	JFIF	
	02 ₁₆	TIFF	
	0F ₁₆	JPEG	

FIG.9

Value (MSB)	Value (LSB)	Type	Meaning
40 ₁₆	Page Description Language		
	03 ₁₀	PCL	HP-GL/2 is included as part of the PCL language (PCL and HP-GL/2 are registered trademarks of Hewlett-Packard Company.)
	04 ₁₀	HP-GL	Hewlett-Packard Graphics Language (HP-GL is a registered trademark of Hewlett-Packard Company.)
	05 ₁₀	PJL	Peripheral Job Language (Hewlett-Packard Co.)
	06 ₁₀	PS	PostScript Language (Postscript is a trademark of Adobe Systems Incorporated.)
	07 ₁₀	IPDS	Intelligent Printer Data Stream (IBM)
	08 ₁₀	PPDS	IBM Personal Printer Data Stream (Lexmark International, Inc.)
	09 ₁₀	EscapeP	ESC/P (Epson Corp.)
	10 ₁₀	Epson	(Epson Corp.)
	11 ₁₀	DDIF	Digital Document Interchange Format (Digital Equipment Corp.)
	12 ₁₀	Interpress	(Xerox Corp.)
	13 ₁₀	ISO6429	Control functions for Coded Character Sets (ISO Standard)
	14 ₁₀	LineData	Lines of data as separate ASCII or EBCDIC records and containing no control functions (no CR, LF, HT, FF etc.). (See ISO 10175 Document Printing Application (DPA)) (ISO Standard)
	15 ₁₀	MODCA	Mixed Object Document Content Architecture (IBM)
	16 ₁₀	REGIS	Remote Graphics Instruction Set (Digital Equipment Corp.)
	17 ₁₀	SCS	SNA Character String Bi-directional print data stream for SNA LU-1 mode of communications (IBM)
	18 ₁₀	SPDL	ISO 10180 : Standard Page Description Language (ISO Standard)
	19 ₁₀	TEK4014	Tektronix 4014 Graphics Terminal (Tektronix Corp.)

FIG.10

Value (MSB)	Value (LSB)	Type	Meaning
	20 ₁₀	PDS	
	21 ₁₀	IGP	(Printronix Corp.)
	22 ₁₀	CodeV	Magnum Code-V,Image and printer control language (QMS,Inc)
	23 ₁₀	DSC-DSE	Data Steam Compatible and Emulation Bi-directional print data stream for non-SNA(DSC) and SNA LU-3 3270 controller (DSE) communications (IBM)
	24 ₁₀	WPS	Windows Printing System (Microsoft Corporation.)
	25 ₁₀	LN03	Early DEC-PPL3 (Digital Equipment Corp.)
	26 ₁₀	CCITT	
	27 ₁₀	QUIC	Quality Information Code (QMS,Inc)
	28 ₁₀	CPAP	Common Printer Access Protocol (Digital Equipment Corp.)
	29 ₁₀	DEC-PPL	Digital ANSI-Compliant Printing Protocol (Digital Equipment Corp.)
	30 ₁₀	Simple Text	character coded data,including NUL,CR,LF, HT,and FF control characters,(See ISO 10175 Document Printing Application(DPA)) (ISO Standard)
	31 ₁₀	NPAP	Network Printer Alliance Protocol(This protocol has been superseded by the IEEE1284. 1 TIPS1 Std (ref,TIPS1=49 ₁₀))
	32 ₁₀	DOC	Document Option Commands (QMS,Inc)
	33 ₁₀	ImPRESS	(QMS,Inc)
	34 ₁₀	Pinwriter	24 wire dot matrix printr for USA,Europe,and Asia except Japan. (NEC)
	35 ₁₀	NPDL	Page printer for Japanese market (NEC)
	36 ₁₀	NEC201PL	PC-PRO201 Series:Serial printer language used in the Japanese market. (NEC)
	37 ₁₀	Automatic PDL sensing	Automatic sensing of the interpreter language family by the printer examining the document content.Which actual interpreter language families are sensed depends on the printer implementation.
	38 ₁₀	Pages	Page printer Advanced Graphic Escape Set (IBM Japan)
	39 ₁₀	LIPS	LBP Image Processing System

FIG. 11

Value (MSB)	Value (LSB)	Type	Meaning
	40 ₁₀	TIFF	Tagged Image File Format (Aldus)
	41 ₁₀	Diagnostic	A hex dump of the input to the interpreter
	42 ₁₀	PSPrinter	The PostScript Language used for control (with any PDLs) (Adobe Systems Incorporated)
	43 ₁₀	CaPSL	Canon Print Systems Language (Canon Inc.)
	44 ₁₀	EXCL	Extended Command Language (Talaris Systems Inc.)
	45 ₁₀	LCDS	Line Conditioned Data Stream (Xerox Corporation)
	46 ₁₀	XES	Xerox Escape Sequences (Xerox Corporation)
	47 ₁₀	PCLXL	Printer Control language.Extended language features for printing,and printer control. (Hewlett-Packard Co.)
	48 ₁₀	ART	Advanced Rendering Tools (ART IV) (Fuji Xerox Co.,Ltd.)
	49 ₁₀	TIPSI	Transport Independent Printer System Interface (ref.IEEE Std.1284.1)
	50 ₁₀	Prescribe	Technical reference manual: "PRESCRIBE II Programming Manual"
	51 ₁₀	LinePrinter	A simple-text character stream which supports the control codes LF,VT,FF,and plus Centronics or Dataproducts Vertical Format Unit(VFU) language
	52 ₁₀	IDP	Imaging Device Protocol (Apple Computer.)
	53 ₁₀	XJCL	Xerox Job Control Language (JCL) (Fuji Xerox Co.,Ltd.)
	54 ₁₀	PDF	Adobe Portable Document Format (Adobe Systems,Inc.)
	55 ₁₀	RPDL()	Ricoh Page Description Language for printers (RICOH,Co.LTD)
	56 ₁₀	IntermecIPL	Intermec Printer Language for label printers (Intermec Corporation)
	57 ₁₀	UBIFingerprint	An intelligent basic-like programming language for label printers. (United Barcode Industries)
	58 ₁₀	UBIDirectProtocol	An intelligent control language for label printers. (United Barcode Industries)
	59 ₁₀	Fujitsu Printer Language	(FUJITSU LIMITED)
80 ₁₆ ~8F ₁₆	59 ₁₆ ~FF ₁₆	Vendor Dependent format	
FE ₁₆	Special meaning		
	00 ₁₆	Unit Plug defined	
	01 ₁₆	Don't care	

FIG.12

```

sequenceDiagram
    participant C as CONTROLLER (PC, STB)
    participant S as AV/C PRINTER SUBUNIT

    Note over C: ST1
    C->>S: CAPTURE COMMAND
    Note over S: ST2
    S->>C: 
    Note over C: ST3
    C->>S: CAPTURE COMMAND
    Note over C: ST4
    
```

Sequence diagram illustrating the process of generating a capture command with rewritten print data:

- ST1:** CONTROLLER (PC, STB) sends CAPTURE COMMAND to AV/C PRINTER SUBUNIT.
- ST2:** AV/C PRINTER SUBUNIT sends a response packet back to CONTROLLER (PC, STB).
- ST3:** CONTROLLER (PC, STB) receives the response packet.
- ST4:** CONTROLLER (PC, STB) sends CAPTURE COMMAND (with rewritten print data) back to AV/C PRINTER SUBUNIT.

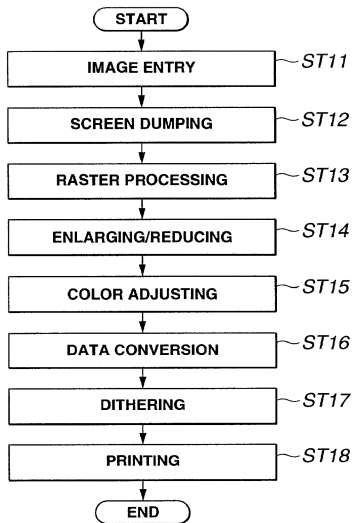


FIG.14

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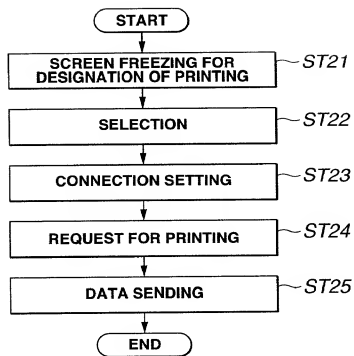


FIG.15

TOP SECRET 2000

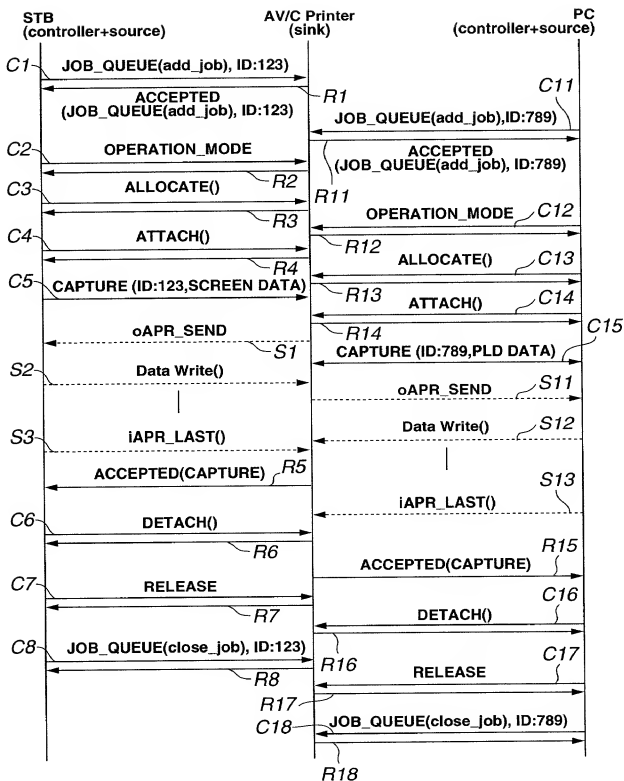


FIG.16

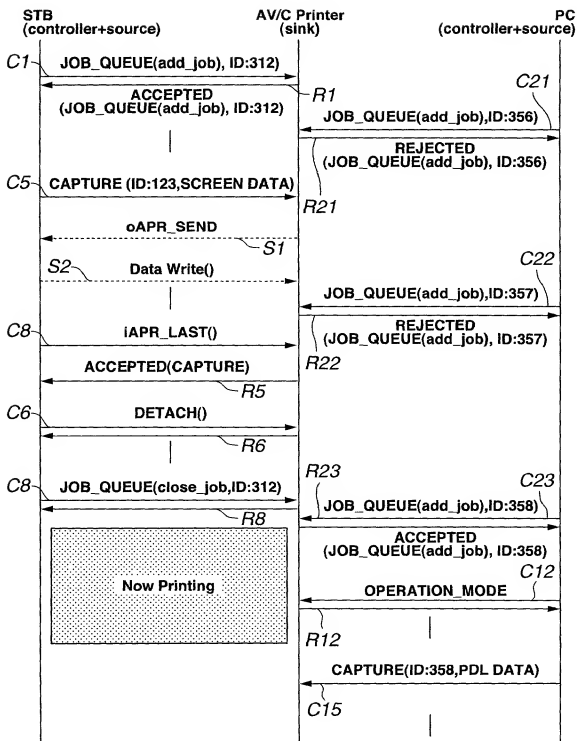


FIG.17


```

sequenceDiagram
    participant STB as STB<br/>(controller+source)
    participant Printer as AV/C Printer<br/>(sink)
    participant PC as PC<br/>(controller+source)

    STB->>Printer: C1 JOB_QUEUE(add_job), ID:456)
    Printer->>PC: R1 JOB_QUEUE(add_job),ID:800)
    PC->>Printer: C31 REJECTED<br/>(JOB_QUEUE(add_job), ID:800)
    Printer->>STB: R31 CAPTURE (ID:0,SCREEN DATA)
    STB->>Printer: S1 oAPR_SEND
    STB->>Printer: S2 Data Write()
    Printer->>PC: C32 JOB_QUEUE(add_job),ID:802)
    PC->>Printer: REJECTED<br/>(JOB_QUEUE(add_job), ID:802)
    Printer->>STB: R32 JOB_QUEUE(close_job,ID:456)
    STB->>Printer: R8 Now Printing
    Printer->>PC: C33 JOB_QUEUE(add_job),ID:804)
    PC->>Printer: REJECTED<br/>(JOB_QUEUE(add_job), ID:804)
    Printer->>PC: R33 JOB_QUEUE(add_job),ID:806)
    PC->>Printer: C34 ACCEPTED<br/>(JOB_QUEUE(add_job), ID:806)
    Printer->>PC: C12 OPERATION_MODE
    PC->>Printer: R12 CAPTURE(ID:806,PDL DATA)
    Printer->>STB: C15
  
```

FIG. 18

FIG. 19

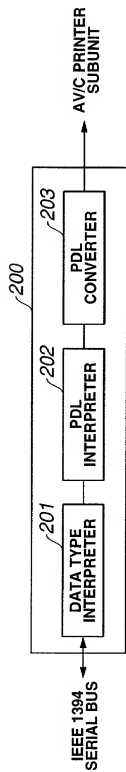


FIG.19